AMENDMENTS TO THE CLAIMS

Listed below are the changes made to the claims. The listing of claims below replaces all prior versions and listings of claims in the application. The list of claims presents each claim with its respective status shown in parentheses.

Please cancel Claims 128-148 without prejudice or disclaimer, as indicated below.

1.-74.   (Canceled)

75.   (Previously Presented) A method of reducing traffic in a decentralised peer-to-peer network, said peer-to-peer network operating over an underlying network comprising first and second network portions, the method comprising:

routing a peer-to-peer message in one of said network portions with an intended destination in the other of said network portions to a gateway between peer-to-peer nodes residing on said first and second network portions; and

controlling transport of said message at said gateway to limit propagation of said message into said other of said network portions.

76.   (Previously Presented) A method as claimed in claim 75 wherein said first network portion comprises a portion of said underlying network managed by a first entity and said second network portion comprises a portion of said underlying network connected to said first network portion across a boundary.

77.   (Previously Presented) A method as claimed in claim 76 implemented to limit a number of peer-to-peer connections across said boundary to a permitted maximum.

78.   (Previously Presented) A method as claimed in claim 75 wherein said transport controlling comprises blocking said message at said gateway.

79.   (Previously Presented) A method as claimed in claim 75 wherein said transport controlling comprises redirecting said message to a peer-to-peer node within said one of said network portions.

80.   (Previously Presented) A method as claimed in claim 75 wherein said transport controlling comprises responding to said message from said gateway.

81. **(Previously Presented)** A method as claimed in claim 80 wherein said message comprises a query, and wherein said responding comprises sending a response to said query comprising cached data derived from previous response to queries.

82. **(Previously Presented)** A method as claimed in claim 80 wherein said message comprises a file request, and wherein said responding comprises sending a response to said file request comprising previously cached data for a requested file.

83. **(Previously Presented)** A method as claimed in claim 75 wherein said message comprises a file request message, and wherein said controlling comprises modifying a response to a previous file search request such that said response does not indicate that a requested file may be found in said other of said network portions.

84. **(Previously Presented)** A method as claimed in claim 83 wherein a said requested file is identified by a hash value.

85. **(Previously Presented)** A method as claimed in claim 83 further comprising storing requested files in a cache, and wherein said response is modified to refer to said cache.

86. **(Previously Presented)** A method as claimed in claim 83 wherein said underlying network comprises a third network portion, and wherein said modifying comprises modifying said response to indicate that said requested file is obtainable from a peer-to-peer node located on said third network portion.

87. **(Previously Presented)** A method as claimed in claim 75 wherein said physical network comprises a third network portion, wherein use of each of said network portions has an associated cost, wherein data transport over said third network portion has a cost less than a cost associated with said other of said network portions, and wherein said controlling comprises directing said message into said third network portion.

88. **(Previously Presented)** A method as claimed in claim 75 wherein a said peer-to-peer message has a message identifier, and wherein said controlling comprises:

    storing said message identifier for said message,

    monitoring message identifiers of messages passing through said gateway, and

    limiting propagation of said identified message such that said message passes between said first and second network portions no more than a permitted maximum number of times.

89. **(Previously Presented)** A method as claimed in claim 88 wherein said permitted maximum number of times is one.

90. **(Previously Presented)** A method as claimed in claim 75 wherein said network portions comprise domains of an internet.

91. **(Previously Presented)** A method as claimed in claim 74 wherein said one of said network portions comprises said first network portion and said other of said network portions comprises said second network portion.

92. **(Previously Presented)** A computer network message controller for reducing traffic in a decentralised peer-to-peer network, said peer-to-peer network operating over a physical network comprising first and second network portions, said network message controller comprising:

a router for routing a peer-to-peer message in one of said first network portions with an intended destination in the other of said network portions to a gateway between peer-to-peer nodes residing on said first and second network portions; and

a gateway controller configured to control transport of said message into said other of said network portions

93. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said first network portion comprises a portion of said physical network managed by a first entity and said second network portion comprises a portion of said physical network connected to said first network portion across a boundary.

94. **(Previously Presented)** A computer network message controller as claimed in claim 93 wherein said gateway controller is configured to limit a number of peer-to-peer connections across said boundary to a permitted maximum.

95. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said gateway controller is configured to block said message at said gateway.

96. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said gateway controller is configured to redirect said message to a peer-to-peer node within said one of said network portions.

97. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said gateway controller is configured to respond to said message.

98. **(Previously Presented)** A computer network message controller as claimed in claim 97 further comprising a cache to store data, wherein said message comprises a query, and wherein said gateway controller is configured to send a response to said query including data from said cache.

99. **(Previously Presented)** A computer network message controller as claimed in claim 97 wherein said message comprises a file request, further comprising a cache to store data derived from previous responses to file requests, and wherein said gateway controller is configured to send a response to said file request including data from said cache.

100. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said message comprises a file request message, and wherein said gateway controller is configured to modify a response to a previous file search request such that said response does not indicate that a requested file may be found in said other of said network portions.

101. **(Previously Presented)** A computer network message controller as claimed in claim 100 wherein a said requested file is identified by a hash value.

102. **(Previously Presented)** A computer network message as claimed in claim 100 further comprising a cache for storing requested files, and where said gateway controller is configured to modify said response to refer to said cache.

103. **(Previously Presented)** A computer network message as claimed in claim 92 wherein said underlying network comprises a third network portion, and wherein said gateway controller is configured to modify said response to indicate that said requested file is obtainable from a peer-to-peer node located on said third network portion.

104. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein a said peer-to-peer message has a message identifier, and wherein said gateway controller is configured to store said message identifier for said message, monitor message identifiers of messages passing through said gateway, and limit propagation of said identified message such that said message passes between said first and second network portions no more than a permitted maximum number of times.

105. **(Previously Presented)** A computer network message controller as claimed in claim 104 wherein said permitted maximum number of times is one.

106. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said one of said network portion comprises said first network portion and said other of said network portions and said other of said network portions comprises said second network portion, and wherein said router and said gateway controller comprise part of said first network portion.

107. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said one of said network portions comprises said first network portion and said other of said network portions comprises said second network portion.

108. **(Previously Presented)** A computer network message controller as claimed in claim 92 wherein said gateway controller comprises a processor, and program memory storing processor control code coupled to said processor to load and implement said code, said code comprising code to configure said gateway controller to operate as claimed in claim 92.

109. **(Previously Presented)** A carrier carrying the processor control code of claim 108.

110. **(Previously Presented)** A gateway controller, in particular for the computer network message controller of claim 92, for reducing traffic in a decentralised peer-to-peer network operating over an underlying network comprising first and second network portions, the controller being configured for operation at a gateway between peer-to-peer nodes residing on said first and second network portions, the gateway controller comprising:

an interface for said first and second network portions, for receiving a peer-to-peer message in one of said first network portions with an intended destination in the other of said network portions; and

a controller configured to control transport of said message into said other of said network portions.

111. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said controller is configured to block said message at said gateway.

112. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said controller is further configured to redirect a said message to a peer-to-peer node within said one of said network portions.

113. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said controller is further configured to respond to a said message.

114. **(Previously Presented)** A gateway controller as claimed in claim 113 comprising a query cache to store data derived from responses to queries, and wherein said controller is configured to respond to a said query using data from said query cache.

115. **(Previously Presented)** A gateway controller as claimed in claim 113 further comprising a file request cache to store data derived from responses to file requests, and wherein said controller is configured to respond to a said file request using data from said file request cache.

116. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said first and second network portions comprise physical portions of said underlying network.

117. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said message comprises a file request message, and wherein said controller is configured to modify a response to a previous file search request such that said response does not indicate that a requested file may be found in said other of said network portions.

118. **(Previously Presented)** A gateway controller as claimed in claim 117 wherein a said requested file is identified by a hash value.

119. **(Previously Presented)** A gateway controller as claimed in claim 117 further comprising a cache for storing requested files, and wherein said controller is configured to modify said response to refer to said cache.

120. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said underlying network comprises a third network portion, and wherein said controller is configured to modify said response to indicate said requested file is obtainable from a peer-to-peer node located on said third network portion.

121. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein a said peer-to-peer message has a message identifier, and wherein said controller is configured to store said message identifier for said message, monitor message identifiers of messages passing through said gateway, and limit propagation of said identified message such that said message passes between said first and second network portions no more than a permitted maximum number of times.

122. **(Previously Presented)** A gateway controller as claimed in claim 121 wherein said permitted maximum number of times is one.

123. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said first network portion comprises a portion of said underlying network managed by a first entity and said second network portion comprises a portion of said underlying network connected to said first network portion across a boundary, and wherein said controller is configured to provide a limited number of peer-to-peer connections across said boundary.

124. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said one of said network portions comprises said first network portion and said other of said network portions comprises said second network portion.

125. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said network portions comprise domains of an internet.

126. **(Previously Presented)** A gateway controller as claimed in claim 110 wherein said controller comprises a processor, and program memory storing processor control code coupled to said processor to load and implement said code, said code comprising code to configure said controller to control transport of said message into said other of said network portions.

127. **(Previously Presented)** A carrier carrying the processor control code of claim 126.

128.-148. **(Canceled)**